

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 October 2004 (28.10.2004)

PCT

(10) International Publication Number
WO 2004/091939 A1

(51) International Patent Classification⁷: **B60C 15/00**,
9/02, B29D 30/10, B60C 15/05

(74) Agents: **BOTTERO**, Carlo et al.; Pirelli S.p.A., Viale
Sarca, 222, I-20126 Milano (IT).

(21) International Application Number:
PCT/IB2003/001473

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 18 April 2003 (18.04.2003)

(25) Filing Language: Italian

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **PIRELLI
PNEUMATICI S.p.A.** [IT/IT]; Viale Sarca, 222, I-20126
Milano (IT).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

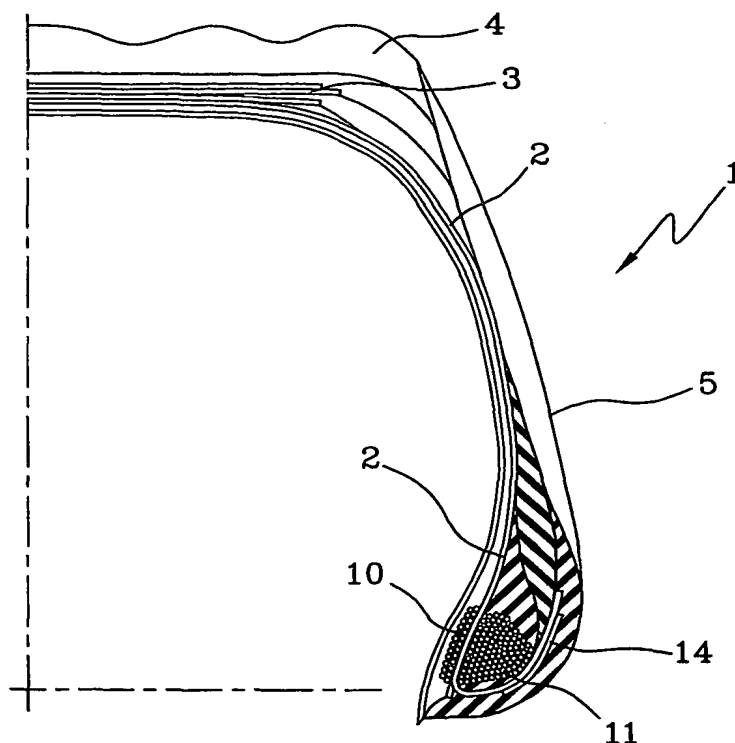
(75) Inventors/Applicants (*for US only*): **NOTO, Rodolfo**
[IT/IT]; c/o Pirelli Pneumatici S.p.A., Viale Sarca, 222,
I-20126 Milano (IT). **LO PRESTI, Gaetano** [IT/IT];
c/o Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126
Milano (IT). **DE GESE, Ignazio** [IT/IT]; c/o Pirelli
Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT).
LACAGNINA, Claudio [IT/IT]; c/o Pirelli Pneumatici
S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TYRE FOR VEHICLE WHEELS AND METHOD OF MANUFACTURING



(57) Abstract: A tyre for vehicle wheels comprising a carcass structure including at least one carcass ply (2), at least one annular reinforcing structure associated with said carcass structure, one tread band (4) at a radially external position to said carcass structure, and a pair of sidewalls (5) at axially opposite positions on said carcass structure, each carcass ply (2) comprising a plurality of elongated elements, said elements being disposed in a substantially U-shaped conformation around the cross-section profile of said tyre (1), said carcass structure having two side portions at positions spaced apart from each other in an axial direction, and a crown portion extending at a radially external position between said side portions, wherein only a number of the plurality of said elongated elements is turned-up around said at least one annular reinforcing structure.